

HIV/AIDS Epidemiology

Narrative

The MDCH Bureau of Epidemiology calculates trends in HIV and AIDS cases annually. The most recent analysis, *Annual Review of HIV Trends in Michigan (2007-2011)*, is available on MDCH's website at http://www.michigan.gov/mdch/0,4612,7-132-2940_2955_2982_46000_46003-36304--,00.html. These trends were based upon the reported number of persons diagnosed with HIV infection between 2007 and 2011, adjusted to account for reporting delay. These trends show that the overall number and rate of persons diagnosed with HIV infection (including AIDS) in Michigan remained stable between 2007 and 2011, at an average of 808 new cases per year and an average rate of 8.2 cases per 100,000 population. This is the third consecutive trends report to show a stable number and rate of new HIV diagnoses in Michigan.

Michigan residents with HIV infection continue to be predominantly men who have sex with men (MSM), black persons, persons aged 20-44 years at the time of HIV diagnosis, and/or residents of the Detroit Metro Area (DMA)¹. MSM were 50% of all new diagnoses between 2007 and 2011. Of these newly diagnosed MSM, 58% are black, while 37% are white. There were no significant increases or decreases in new diagnoses among MSM of any race between 2007 and 2011, but black males continue to make up the largest proportion of all MSM HIV cases in Michigan. The number of new diagnoses decreased among persons with heterosexual risk for the fourth consecutive report. This is the second report in seven reports that the rate of new diagnoses did not increase among persons aged 13-19 years at the time of HIV diagnosis. The rate of new diagnoses increased among persons 20-24 and 25-29 years at diagnosis and decreased among those 40-44 years at diagnosis.

Finally, the rate of new diagnoses increased among males (average 2% per year) and decreased among black females (average 4% per year) and females overall (3% per year). There was also an increase in the rate of new diagnoses for white persons overall (2% per year). The rate of new diagnoses remained stable among all other race/sex groups.

From 2007-2011, the proportion of persons diagnosed with HIV and AIDS concurrently (AIDS within 30 days of initial HIV diagnosis) decreased significantly from 25% in 2007 to 18% in 2011. There were also significant decreases in the proportions of concurrent diagnoses among males overall (26% to 22%). Men had a significantly higher proportion of concurrent diagnoses than women, and persons of black race had significantly fewer concurrent diagnoses than persons of all other races (19% vs. 25% respectively).

¹ The Detroit Metro Area (DMA) consists of Lapeer, Macomb, Monroe, Oakland, St. Clair, and Wayne Counties, including the City of Detroit.

As of January 2013, there are 7,912 people currently living with HIV stage 3 (formerly known as AIDS) in Michigan, and 7,169 people currently living with HIV non-stage 3. HIV infection is distributed disproportionately in Michigan. Sixty-five percent of those persons currently living with HIV (any stage) in Michigan reside in the DMA (9,776 of the 15,081 cases statewide), but only 43 percent of the general population resides in the DMA. The rest of the state, referred to as “Out-state,” has fewer cases compared with the general population distribution.

Unmet Need

Estimation methods

The Division used one data source to produce the numbers in the Unmet Need Framework: eHARS (enhanced HIV/AIDS Reporting System), the surveillance database that contains information on all reported cases of HIV in Michigan. All stages of HIV, including stage 3 (formerly known as AIDS) are notifiable diseases in Michigan, so both are included in eHARS.

In addition to information on reported cases, eHARS also houses all HIV laboratory tests. Michigan implemented mandatory HIV laboratory reporting on April 1, 2005 for positive diagnostic HIV tests and July 1, 2005 for all HIV viral load (VL) and CD4 tests. These laboratory results are managed in Michigan’s new HIV Laboratory Management System (LMS) and imported into eHARS.

Completed labs are current in eHARS within two weeks.

Primary Medical Care (PMC) was defined as having a laboratory result for a CD4 count and/or percent or a VL measure during a 12-month time period (October 1, 2012 through September 30, 2013) among patients in eHARS who were aware of their infection. In order to be included in analysis of PMC and considered aware of their infection, they had to meet one of the following criteria:

- 1) Person had ‘yes’ to any one of the following on the HIV adult case report form (ACRF):
 - a. “Patient informed of their infection?”
 - b. “Is patient receiving or been referred for: HIV related medical services?”
 - c. “Is patient receiving or been referred for: Substance Abuse treatment services?”
 - d. “Has patient received PCP prophylaxis?”
 - e. “Currently using ARV?”
- Or*
- 2) Person had a CD4 count or percent or a viral load test documented in eHARS (at any point in time)
- Or*
- 3) Person diagnosed with HIV stage 3

eHARS surveillance and laboratory data were used to determine each patient’s most recent CD4 count, CD4 percent, and/or VL test date. Persons diagnosed on or after October 1, 2012 were excluded from analysis to eliminate the possibility of including those who were very recently

diagnosed and had not yet obtained care. Unmet need was calculated by determining the number of persons in eHARS who were diagnosed before October 1, 2012 and had not received a VL or CD4 test between October 1, 2012 and September 30, 2013.

Limitations

While the combination of laboratory and surveillance data offers an ideal way to measure unmet need, there are some limitations to the data that should be noted. Persons who move out of state will automatically be counted as having unmet need if Michigan's HIV Surveillance Program is unaware of the change in residency. The Surveillance Program participates in Routine Interstate Duplicate Review (RIDR), in which Michigan collaborates with other states under the guidance of the Centers for Disease Control and Prevention (CDC) to assess and resolve potential case matches between the states. This effort minimizes the effect of changes in residency on unmet need. Similarly, if a person died and Surveillance was not notified, that person would be counted as an unmet need case. Michigan's HIV Surveillance Program also conducts a death match annually to update vital status, thus minimizing the impact on unmet need. Finally, there inevitably is room for error in the LMS. For example, cases can potentially be falsely matched or non-matched to the surveillance database. Overall, however, the LMS is strong and checks are in place to ensure the quality of those data.

Assessment of unmet need

Of the 5,034 persons with unmet need, 78% are male and 22% are female. This distribution by sex is roughly the same among persons with met need and among all persons with HIV, so there does not appear to be a disproportionate level of unmet need by sex. As of November 2013, both sexes report the same percentage of unmet need (32%).

The majority of persons with HIV in Michigan, whether with met need or unmet need, are black, non-Hispanic (55%) or white, non-Hispanic (35%). Hispanic persons represent only 5% of all persons living with HIV (PLWH) in Michigan, but of Hispanics living with HIV, 44% have unmet need – the highest proportion in comparison to white persons and black persons.

Individuals living with HIV non-stage 3 in Michigan continue to be more likely to have unmet need than people living with HIV stage 3. Thirty-eight percent of people living with HIV non-stage 3 have unmet need, while only 27% of people living with HIV stage 3 have unmet need.

Persons with unmet need are very similar to persons with met need when comparing age at HIV diagnosis. PLWH who were young adults (ages 20-29) at HIV diagnosis have a higher proportion of unmet need when compared to other age groups (36%), followed by adults ages 30-34 (35%), and teens (34%). In general, unmet need is higher among the younger age groups than among those aged 35 or more.

By risk behavior, injection drug users have the highest percentage of unmet need (40%), while 31% of MSM are in the unmet need group.

In terms of geography, those living in Out-State Michigan have a higher proportion of unmet need as those living in the DMA (36% in Out-State and 32% in the DMA). When looking at individual Metropolitan Statistical Areas (MSAs), the areas with the highest percentage of unmet

need are the Benton Harbor MSA (47%), the Flint MSA (41%), and the Saginaw-Bay City MSA (41%), all of which have seen slight increases in unmet need since 2012.

Unmet Need has remained relatively constant over the past 5 years, although the proportion of those living in Out-State Michigan with unmet need appears to be higher than the proportion of unmet need among those living in the DMA, as opposed to last fiscal year when those proportions were about the same.